

LANDSCAPE AESTHETICS
EFFECTS OF ALTERNATIVES REPORT
FOR THE
FEIS FLAGTAIL FIRE RECOVERY PROJECT

BLUE MOUNTAIN RANGER DISTRICT
MALHEUR NATIONAL FOREST

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LANDSCAPE AESTHETICS

INTRODUCTION

This report addresses the effects to visual quality and landscape aesthetics for the Flagtail Fire Recovery project and is the second of two reports. The first report described the existing condition and the desired future landscape character. This report describes the effects of the alternatives to landscape aesthetics and how they move the conditions of the area toward the desired landscape character.

Analysis Methods

Management activities such as timber harvesting can affect forest scenic quality by changing the predominant form, color, line, or texture in a given viewing area. The degree of visibility of these events depends on the interaction of certain elements to the viewers such as:

- Slope and aspect of the land
- Surrounding landscape
- Frequency and duration of view
- Fuel reduction treatment methods used
- Slash disposal methods

These factors have been incorporated into the analysis of the effects of each alternative. The scope of the analysis is limited to the area burned by the fire. The time frames used for benchmarks are 5, 15, 25, 50, and 150 years when conditions, mostly vegetation related, have changed enough to display differences between alternatives.

Effects to Visual Quality are measured in terms of whether the alternatives meet the Visual Quality Objectives (VQOs) outlined in the Forest Plan. VQOs are minimum guidelines for meeting Forest Plan visual goals. Visual quality is addressed separately by management area (MA); visual quality objectives are different in the visual corridor (MA 14) than those outside the corridor.

The Malheur National Forest's visual resources are managed under the USDA's National Forest Scenery Management System located in Agricultural Handbook Number 701. Effects to Landscape Aesthetics are measured in terms of positive or negative impacts to scenic integrity and ecological landscape integrity. The terms “ecological integrity” and “scenic integrity” are used as general ratings of the existing landscape character. Ecological integrity is the degree to which all landscape components and their interactions are represented, functioning, and able to renew themselves. Scenic integrity is a measure of intactness of the landscape and the elements that deviate from the desired landscape character.

Impacts that introduce negative elements to the landscape reduce the scenic integrity. Impacts that retain or support positive elements of the landscape increase the scenic integrity. These can be direct and indirect effects. Impacts that degrade or reduce sustainability of the forest ecology decrease ecological landscape integrity. Impacts that improve or support sustainability of the forest ecology, increase ecological landscape integrity. These impacts are generally indirect effects to landscape aesthetics.

VISUAL QUALITY

Environmental Consequences

Direct and Indirect Effects

Alternative 1

Viewshed Corridor (MA 14)

No reforestation activities would occur and vegetative recovery would take place at a slower rate than if planted. The visual quality rating would remain at modification until the area is sufficiently reforested large enough to give a forest-like appearance to avoid the appearance of large openings and to provide screening of stumps, roads and old skid trails. It will take up to 50 years to reforest most of the area through natural regeneration due to the lack of seed trees. The visual quality objectives of obtaining large ponderosa pine and western larch in the visual corridor will take about 180 years, about 30 years longer than with the other alternatives. Heavy fuel loading created in about 15 years by falling snags would average about 46 tons per acre for most of the area and would not meet visual quality objectives for the visual corridor foreground. There would be an increased the chance of a stand-replacing fire in the future due to the heavy fuel loading increasing the time needed to meet the desired future condition.

Roadside Hazard Tree Cutting

Roadside hazard tree cutting would occur on roads open to the public. As mentioned in the existing condition, some of the larger road side hazard trees have already been cut and residue piled in the visual corridor, but additional smaller hazard trees still need to be cut. County Road 63 and Forest Road 24 are within the RHCA for the Silvies River. Along portions of these roads, large amounts of residue will be created from cutting hazard trees. Under Alternative 1, these are to be left in place. Since many of these trees would fall onto the road or the roadside ditch on the uphill side, they would need to be moved to the approximate 15 foot strip between the ditch and a fence that runs parallel to the road. The negative visual effects created from the roadside hazard tree cutting would be the stumps which can be mitigated by making them as low as possible and the slash piled up along the road on the uphill side which would not meet the visual quality objectives for the visual corridor.

Outside the Visual Corridor (MA 1, 2, 3A, 13)

Natural regeneration recovery would be similar to what would occur in the visual corridor except that there are areas with more live trees that will speed up natural regeneration due to an increase in seed source. After about 15 years, the visual quality changes to maximum modification due to increased visibility after many snags have

fallen. Roads and past management activities are more visible. Since the visual quality objective is maximum modification, the change does not affect meeting Forest Plan standards. The change back to visual quality of modification is delayed by 25 years compared to the action alternatives.



Picture 1. Alternative 1 would retain the current amount of dead trees across the landscape.

Common to Alternatives 2, 3 and 5

Tree Marking and Harvest Unit Designation

Tree marking with paint, ribbons and signs can have a negative visual impact in visual corridor foreground areas.

Mitigating measures:

Where paint can be seen from County Road 63, it is to be applied to the side of the tree facing away from the road to avoid seeing paint from the road. Ribbon and signs are to be removed upon completion of the harvest unit activities. This is mostly effective, but some paint will still be visible. Ribbon and signs are to be removed upon completion of the harvest unit activities and is very effective.

Logging Systems

Skyline Logging

This system takes logs from stump to a landing using an overhead system of cables to which logs are attached and logs dragged through cable corridors throughout the unit. The corridors may leave straight vertical lines in a fan-shaped pattern on the landscape. Depending on factors such as the slope and aspect of the land, surrounding landscape, and frequency and duration of view, skyline logging systems may need mitigating measures in the visual corridor to meet Partial Retention VQO. About 38 percent of the visual corridor would be skyline harvested with these alternatives. The duration of view is short due to the number of curves on County Road 63. Units 8 and 22 have the most duration of view of the skyline units in the foreground of the visual corridor and are on steep slopes. The other skyline logging units are partially screened by topography or are in the middleground where a more altered landscape is allowed.

Mitigating measures:

Winter skyline logging over snow and frozen ground retains vegetation in the corridors and minimizes soil exposure and is a very effective mitigating measure and it is especially beneficial for units 8 and 22 due to the high visibility and duration of the view. If winter logging is not possible and negative visual impacts of color or texture contrasts are present, debris will need to be spread over disturbed corridors in sufficient amounts to eliminate the contrast. This can be mostly effective if sufficient material is available to reduce the contrast sufficiently.



Picture 2. This dense stand of large dead trees in the visual corridor across from the Bear Valley Work Center is still smoking in this picture. The stand will eventually result in a heavy fuel loading under Alternative 1.

Tractor Yarding

This method is used on gentle slopes (generally less than 35% slope). Tractor yarding leaves skid trails unless it is done over snow or frozen ground. Skid trails are not as straight of a linear form as with skyline corridors but they can create negative impacts that do not meet partial retention.

Mitigating measures:

Winter tractor logging over snow and frozen ground is the most effective measure to avoid negative visual impacts. Units 4, 26, 28 and 104 are the most likely not to meet partial retention if not winter logged due to being close to County Road 63, slope, aspect and duration of view. An alternate measure is to use a machine capable of picking up logs and boulders and smoothing berms to rehabilitate skid trails. This was done as fire rehabilitation for the dozer fire lines and it was very effective in meeting visual management objectives. Areas of greater than 200 square feet of soil disturbance in the immediate foreground of County Road 63 shall be treated to replace disturbed vegetation or scatter debris to make the area similar in appearance to adjacent undisturbed areas.

This is mostly effective provided the debris and vegetation used is the same type and amount as outside the disturbed area.

Helicopter Logging

This results in very little impact to the visual resource because there is little to no ground disturbance (no roads, skid trails, skyline corridors). Helicopter landings can have negative impacts to visual quality.

Mitigating measures:

Landings are to be rehabilitated within 1 to 2 years after use by sub-soiling compacted areas, scattering debris and vegetated by seeding or planting. This is mostly effective provided the debris and vegetation used is the same type and amount as outside the disturbed area.

Utilization Standards

There will be additional trees left in harvest units that will not meet utilization standards and not removed by post sale fuels treatments. These extra dead trees are up to 10 or 12 inches in diameter on skyline logged units and 12 inches in diameter on helicopter logged units. These trees will help provide additional screening and give visual variety, helping to reduce the negative visual impacts of timber harvesting.

Riparian Buffers

Riparian buffers range from 300 feet on each side of fish bearing streams, 150 on each side of other perennial streams, 50 to 25 feet for some ephemeral draws down to 10 feet for a few ephemeral draws. Wetlands would have a 50-foot riparian buffer if less than an acre. Wetlands greater than 1 acre would have a 150 foot buffer. These buffers may at times, have a straight line delineating the buffer (untreated) from the treated part of the unit. Generally, these should look natural as riparian areas usually have denser growth along streams that is noticeable on the landscape. County Road 63 is within the 300 foot wide riparian buffer along the Silvies River. This means that, except for roadside hazard tree removal, there will be no trees harvested within up to about 250 feet on the north side and 350 feet of the south side of the road. This helps to reduce the negative visual effects of harvesting. However, when these snags fall down, the fuel loading would exceed Forest Plan standards for the foreground distance zone.

Common to Alternatives 2, 3, 4 and 5

Roadside Hazard Tree Cutting

Roadside hazard tree cutting would occur on roads open to the public. As mentioned in the existing condition, some of the larger road side hazard trees have already been cut and residue piled in the visual corridor, but additional smaller hazard trees still need to be cut. County Road 63 and Forest Road 24 are within the RHCA for the Silvies River. Where large amounts of residue are created from cutting hazard trees, it would be moved where it could provide benefit to the riparian area or piled and burned. The negative visual

effects created from the roadside hazard tree cutting would be the stumps which can be mitigated by making them as low as possible.

Fuel Reduction Treatments

Fuel treatments done as part of salvage harvest include whole tree yarding for tractor and skyline logging systems and hand piling tops and limbs in helicopter logged units. Fuel treatments planned where trees less than 8 inches in diameter are cut include grapple piling or machine skidding on slopes less than 35 percent and hand piling on steeper slopes. Slash piles may be on the landscape until sufficient burning factors are met.

Mitigating measures:

Areas of greater than 200 square feet of soil disturbance in the immediate foreground of County Road 63 shall be seeded or planted to replace disturbed vegetation or scatter debris to make the area similar in appearance to adjacent undisturbed areas. This is mostly effective provided the debris and vegetation used is the same type and amount as outside the disturbed area.

Tree Cutting

Stumps that are created as part of timber harvest or fuel reduction activities can have negative impacts on visual quality due to color contrasts and un-natural form.

Mitigating measures:

Stumps of trees cut in the immediate foreground (300 ft from County Road 63) are to be cut to within 6 inches of the ground. Stumps should be cut at an angle away from the road to avoid the face of the stump being a contrasting color impact. This is mostly effective in reducing color contrast but not very effective in eliminating the stump form.

Planting

Tree planting will result in prompt reforestation that, in about 15 years, will provide enough screening of stumps, skid trails and roads to improve the visual quality level to modification. By year 25, the trees will have grown enough to improve the visual quality rating to partial retention in the visual corridor and modification outside the visual corridor. The visual quality objective of large ponderosa pine and western larch trees will occur by age 150

Alternative 2

Viewshed Corridor (MA 14)

The visual quality would be reduced from modification to maximum modification because treatments would leave only about an average of about 2.4 large trees per acre in addition to trees not meeting utilization standards, resulting in an appearance similar to large created openings. Mitigation measures mentioned above for stump appearance, slash treatment and disturbed ground will reduce the other negative effects of harvesting activities in the visual corridor. The visual quality will improve to modification by age 15 due to reforestation screening the stumps. Fuel loading remaining after harvest would be treated to meet Forest Plan visual quality standards. Accumulation of fuels from snag

fall in about 15 years would average about 8 tons per acre for most of the area and would meet visual corridor foreground visual quality objectives.

Outside the Visual Corridor (MA 1, 2, 3A, 13)

The effects are similar to what occurs in the visual corridor except for a 10 year delay in reaching the visual quality rating of modification because the land is more altered and larger trees are needed to provide screening. Since the visual quality objective is maximum modification, the delay does not affect meeting Forest Plan standards.

See also Common to Alternatives 2, 3 and 5.

See also Common to Alternatives 2, 3, 4 and 5

Alternative 3

Viewshed Corridor (MA 14)

Alternative 3 creates a high snag variability across each unit. Some snag patches would have snag densities up to 75 snags per acre leaving areas in units between patches with an average of 6 to 11 snags per acre 10 inches DBH and larger. The helicopter units will retain all 10 to 12 inch DBH snags adding between 5 to 30 snags per acre. The visual quality would not be reduced as much as with Alternative 2 because of the higher number of snags to be left, allowing the visual quality rating to remain at modification. However, there would be a visible difference from both alternatives 1 and 4. The burned area will give the appearance of a forest fire being the cause of the dead trees rather than that of a created opening resulting from harvesting as with Alternative 2. Mitigation measures for stumps, slash treatment and disturbed ground will reduce the negative effects of harvesting activities in the visual corridor. Visual corridor foreground visual quality objectives for future fuel loadings will be met.

Outside the Visual Corridor (MA 1, 2, 3A, 13)

The amount of snags remaining is the same as described for the visual corridor. After about 15 years, the visual quality changes to maximum modification due to increased visibility after many snags have fallen. The effects to visual quality are the same as Alternative 2 after 15 years.

See also Common to Alternatives 2, 3 and 5.

See also Common to Alternatives 2, 3, 4 and 5.

Alternative 4

Viewshed Corridor (MA 14)

Cutting dead trees less than 8 inches in diameter and treating created fuels would have about the same effect to the visual quality rating as with Alternative 3 but the evidence of cutting and treatment would be less noticeable, more snags are left and creation of large stumps are avoided. Mitigation measures to reduce the negative effects of fuel reduction activities for stump appearance, slash treatment and disturbed ground are the same as

with Alternative 3. Fuel loading created in about 15 years by falling snags is about 20 percent less than fuels generated by alternative 1 but that is not enough of a reduction to meet visual quality objectives for the visual corridor foreground.

Outside the Visual Corridor (MA 1, 2, 3A, 13)

The effects to visual quality are the same as with Alternative 3.

See also Common to Alternatives 2, 3, 4 and 5.

Alternative 5

Viewshed Corridor (MA 14)

The effects to visual quality are the same as with Alternative 3.

Outside the Visual Corridor (MA 1, 2, 3A, 13)

The effects to visual quality are slightly less than with Alternative 2 because about 14 percent fewer acres are treated. However, the difference is not enough to change the visual quality rating as described for Alternative 2..

See also Common to Alternatives 2, 3 and 5.

See also Common to Alternatives 2, 3, 4 and 5.

Table LA-1: Acres Harvested and Snag Density by Alternative in the Visual Corridor Immediately After Harvest

	Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternative 5
Acres Harvested	0	920	750	0	830
Snag Density*	All, 10-80	2.39	<u>≥ 13</u>	All, 10-80	<u>≥ 13</u>

* Snags that are 10 inches DBH and larger.

Table LA-2: Effects to Visual Quality by Alternative in the Visual Corridor (Resultant VQO)

	In 5 years	In 15 years	In 25 years	In 50 years	In 150 years
Alternative 1 (No Action)	Modification	Modification	Modification	Partial Retention	Partial Retention
Alternative 2	Maximum Modification	Modification	Partial Retention	Partial Retention	Partial Retention
Alternative 3	Modification	Modification	Partial Retention	Partial Retention	Partial Retention

Alternative 4	Modification	Modification	Partial Retention	Partial Retention	Partial Retention
Alternative 5	Modification	Modification	Partial Retention	Partial Retention	Partial Retention

Table LA-3: Effects to Visual Quality by Alternative Outside Visual Corridor

	In 5 years	In 15 years	In 25 years	In 50 years	In 150 years
Alternative 1 (No Action)	Modification	Maximum Modification	Maximum Modification	Modification	Modification
Alternative 2	Maximum Modification	Maximum Modification	Modification	Modification	Modification
Alternative 3	Modification	Maximum Modification	Modification	Modification	Modification
Alternative 4	Modification	Maximum Modification	Modification	Modification	Modification
Alternative 5	Maximum Modification	Maximum Modification	Modification	Modification	Modification

The majority of the area outside of the visual corridor is in the general forest management area (MA 1) and will be more visibly altered by past and future management activities, so the visual quality rating would not be expected to reach partial retention, even for alternative 1 where there are existing roads throughout the landscape.

Landscape Aesthetics/Scenic Integrity

Environmental Consequences

Direct and Indirect Effects

Alternative 1

The scenic integrity level would decrease from the current low to very low in about 15 years because there will not be enough snags standing to break up the out-of-scale appearance of large openings and excessive fuel loadings. The landscape will consist of cross-stacked logs with some standing snags and live trees remaining in the lower severity burn areas. Roads will be more visible. The aesthetics would not improve until tree regeneration is large enough to screen the excessive fuels and roads. Due to the limited number of nearby seed sources, it will take about 50 years for natural conifer regeneration to bring back a forested appearance to increase the scenic integrity level rating to low. Shrubs, forbs sedges and grasses are a component of scenic integrity and recovery can be as soon as two years for low severity burned areas but recovery may take 5 years or more in severely burned areas. The ecological integrity rating is low because a new stand of trees that develops would not be resistant to stand replacement fires due to excessive fuels.

Alternative 2

Salvage harvest and fuel removal activities would reduce the scenic integrity level from low to very low. Large openings (form), existing roads, and effects from tractor and skyline logging systems (line and color) will be the most evident of all action alternatives.

Shrubs, forbs sedges and grass recovery would be the same as alternative 1 except for the areas disturbed by harvesting activities which would have a longer recovery period than with undisturbed areas. Contrasts between ground cover, vegetation, and lighter disturbed soils in skid trails and cable corridors will be evident on 65 percent of the visual corridor and 51 percent of the area outside the visual corridor. This contrast will continue until the vegetation in undisturbed areas encroaches into the disturbed areas or until tree cover is established.

The scenic integrity level would improve to low in about 25 years because by that time the trees will be tall and dense enough to give a forested appearance. About 150 years would be needed to meet the scenic integrity level of high when the old forest structural stage is obtained and the ecological integrity is high. The high ecological rating is dependent on additional management activities, such as thinning and prescribed burning to avoid overstocking and dead fuels that would make the area vulnerable to a stand replacement fire.



Picture 3. Salvage of dead trees on the private land portion of the Flagtail Fire, including dozer piling of slash. Alternative 2 would leave larger dead trees than this and would not result in the soil disturbance caused by dozer piling.

Alternative 3

After harvest and fuel treatment activities, the scenic integrity would still be within the “moderately altered” landscape character description, so it would remain at low. Large openings (form), existing roads, and effects from tractor and skyline logging systems (line and color) will be less visible than with alternative 2 due to the increased number of snags retained and the reduced amount of area harvested. Contrasts between ground cover, vegetation, and lighter disturbed soils in skid trails and cable corridors will be evident on 65 percent inside the visual corridor and 38 percent outside of the visual corridor.

As with alternatives 1 and 4, the scenic integrity level would be reduced to very low in about 15 years because there will not be enough snags standing to break up the out-of-scale appearance of large openings and excessive fuel loadings. The effects of tree planting in improving the scenic integrity level will be the same as with alternative 2. The future ecological integrity and the benefits to maintaining a high scenic integrity are the same as discussed with alternative 2.

Alternative 4

The scenic integrity level remains at low after the fuel reduction activities and would decrease to very low in about 15 years for the same reasons as for alternative 1. The non-commercial removal of small dead trees will cause a slight visual improvement from alternative 1 by reducing fuel loading. Alternative 4 would have about the same effect to scenic integrity as alternative 1 because the future fuel loading is still excessive. The effects of tree planting will have the positive visual benefits of the other action alternatives and will help screen the excessive fuels that will accumulate. Alternative 4 has a low ecological integrity rating for the same reasons and with the same effects as with Alternative 1.

Alternative 5

Since the visual corridor is treated with the same prescription as Alternative 3, the effects to scenic integrity in this area will be the same as with Alternative 3. Outside the visual corridor, the prescription is similar to Alternative 2 but affects about 14 percent fewer acres which is not enough to change the scenic integrity rating. The overall rating in five years was a range from low to very low due to the two areas having different snag levels remaining.

Table LA-4: Effects to Scenic Integrity by Alternative

	In 5 years	In 15 years	In 25 years	In 50 years	In 150 years
Alternative 1 (No	Low	Very Low	Very Low	Low	Low to

Action)					Moderate
Alternative 2	Very Low	Very Low	Low	Moderate*	High*
Alternative 3	Low	Very Low	Low	Moderate*	High*
Alternative 4	Low	Very Low	Very Low to Low	Low to Moderate	Moderate
Alternative 5	Low to Very Low	Very Low	Low	Moderate*	High*

*The moderate rating may be low and the high rating may be moderate outside the visual corridor after 50 years depending on the type and amount of vegetation management.

Ecological Integrity

Ecological integrity can affect scenic integrity. The link between the two is made in the Landscape Aesthetics Handbook for the SMS: "Integrity could also be used to define the wholeness or condition of the ecosystem but it is assumed that will take place as part of the overall integrated ecosystem process. However, a landscape character goal of high scenic integrity should also be one of high ecosystem integrity. One does not necessarily ensure the other." One of the basic premises of the SMS is that natural events such as wildfires may affect scenic attractiveness. Fuel loads that are well above historical levels for the biophysical environment can result in severe wildfires that affect scenic integrity for the long term.

Direct and Indirect Effects

No Action Alternative

The current ecological integrity rating of very low will remain unchanged until another wildfire or future management activity occurs that would reduce the fuel loading when the standing dead trees fall down. This is a fire dependent ecosystem, but the excessive fuel loads in about 15 years will keep the new stands from being resilient to fire for the hot dry and warm dry biophysical environments. The effect of fire, even low intensity fires, would be to cause excessive mortality. If no future management activity is done to reduce the fuels, a wildfire or a series of wildfires would have to occur to reduce the fuel loading enough to allow fire to be a sustaining disturbance element for the dry forest ecosystem.

Alternatives 2, 3 and 5

The current ecological integrity rating of very low will improve over the decades to high in about 150 years, when there will be large trees in the landscape with a diverse structure of sizes. The rating of very high is dependent on additional management activities, such as thinning and prescribed burning to avoid overstocking and dead fuels that would make the area vulnerable to a stand replacement fire and to maintain the open park-like stands of pine and western larch that is characteristic of this forest type. Under both alternatives, the future fuel loadings will be low enough to allow the stands to be resistant to large stand replacing wildfires and prescribed fires.

Alternative 4

The effects would be the same as with Alternative 1 because the regenerated stands are still vulnerable to large stand replacing fires due to high future fuel loads. Prescribed fires could not be done without unacceptable mortality due to fire severity from the high future fuel loads.

Summary of Effects to Ecological Integrity

Table LA-5. Effects to Ecological Integrity by Alternative

	5 years	15 years	25 years	50 years	150+ years
Alternative 1 (no action)	Very Low	Very Low	Very Low	Very Low	Very Low
Alternative 2	Very Low	Low	Low	Moderate	High
Alternative 3	Very Low	Low	Low	Moderate	High
Alternative 4	Very Low	Very Low	Very Low	Very Low	Very Low
Alternative 5	Very Low	Low	Low	Moderate	High

The effects of alternatives that propose efforts to move the vegetation toward historical conditions will be successful in improving ecological integrity. Alternatives 2, 3 and 5 make a sufficient reduction of potential fuel loading to allow the ecological integrity to improve. Alternative 1 does not result in an increase in ecological integrity. Alternative 4 does not reduce future fuels enough to change the conditions that are detrimental to the sustainability of the forest landscape. Therefore, the ecological integrity would continue to be very low.

Effects Related to the Inter-Relationship Between Social Values and Infrastructures

The physical appearance that gives it an identity and the cultural values that people assign to a landscape help define the “sense of place.” People view the issue of roads in very different ways. Many people enjoy and appreciate the access to the area provided by roads. Others desire fewer roads for an increased sense of naturalness of what is seen and heard. The results of public meetings concerning road management, comments to road closure proposals, and letters to the editor of the local newspaper indicate that most of the local people desire open roads.

Direct and Indirect Effects

No Action Alternative

There would be no closing or decommissioning of roads. Good access would remain for people who enjoy activities that occur in close proximity to roads. Road access is especially important to people who have physical disabilities. This alternative does not meet the desires of those that desire fewer roads for an increased sense of naturalness.

Alternatives 2, 3, 4 and 5

With the action alternatives, closure and decommissioning of roads will reduce vehicle access within the Flagtail Fire by about 31 percent. The reduced number of open roads

will reduce access-related activities. Closure of particular roads may adversely affect American Indian access to traditional use areas. Fewer roads are available to handle the same level of road related activity causing more potential conflicts or a sense of crowding between visitors.

The reduced number of open roads will better meet the desires of those people who prefer fewer roads. Since none of the decommissioned roads are to be obliterated, it will take several decades for vegetation and weathering to produce the visual effect of fewer roads on the landscape.

The temporary increase in use of the roads for project work will create the need for maintenance, which will make the roads more apparent by increasing color contrasts along roadsides and giving the roads the appearance of being wider though roadside brushing. Use and maintenance of closed roads for project access will also make them more apparent on the landscape.

Mitigation and Monitoring for Landscape Aesthetics for Alternatives 2, 3 4 and 5

Visual Corridors

Management Requirement/Mitigation Measure	Objective	Responsible Person
Alternatives 2, 3, 4 and 5		
Areas of greater than 200 square feet of soil disturbance in the immediate foreground of County Road 63 shall be seeded or planted to replace disturbed vegetation or scatter debris to make the area similar in appearance to adjacent undisturbed areas. Stumps of trees cut in the immediate foreground (300 ft from County Road 63) are to be cut to within 6 inches of the ground. Stumps should be cut at an angle away from the road to avoid the face of the stump being a contrasting color impact.	Reduce evidence of management activity.	Sale Administrator or Contracting Officer's Representative
Alternatives 2, 3 and 5 only		
Where stumps will be visible within 300 feet of County Rd. 63 (CR 63), cut stumps to less than 6 inches from the lowest ground and cut stumps at an angle away from the road (this will often require a second cut).	Reduce evidence of management and avoid contrasting color impact.	Sale Administrator
When marking trees visible from CR 63, paint the side away from road.	Avoid unnatural color and form.	Marking Crew
Where paint can be seen from County Road 63, it is to be applied to the side of the tree facing away from the road. Ribbon and signs are to be removed upon completion of the harvest unit activities.	Reduce evidence of management and avoid contrasting color and form impact.	Marking Crew Leader Sale

Management Requirement/Mitigation Measure	Objective	Responsible Person
Alternatives 2, 3, 4 and 5		
Winter skyline logging over snow and frozen ground retains vegetation in the corridors and minimizes soil exposure and is the preferred mitigating measure, especially for units 8 and 22. If winter logging is not possible and negative visual impacts of color or texture contrasts are present debris will need to be spread over disturbed corridors.		Administrator
Winter tractor logging over snow and frozen ground is the preferred measure to avoid visual impacts. Units 4, 26, 28 and 104 are the most likely not to meet partial retention if not winter logged due to distance, slope, aspect and duration of view. If winter logging is not possible, debris will need to be spread over disturbed skid trails using a machine capable of picking up logs and boulders and smoothing berms.	Reduce evidence of management and avoid contrasting color and form impact.	Sale Administrator

Monitoring

During harvest or excess fuel removal projects, personnel with training in scenery management would review quantities of slash in the immediate foreground (300 ft) of County Road 63. If quantities were determined to be detrimental to the visual quality of the area, then a site-specific scenery restoration action plan would be designed and implemented to meet the design criteria in the EIS.

Cumulative Effects for Visual Quality, Landscape Aesthetics and Scenic Quality

Common to All Alternatives

Cumulative effects for scenery includes the area burned by the fire both on private lands and publicly owned lands. In review of Appendix J (Cumulative Effects), past, ongoing and reasonably foreseeable actions that could affect the scenery resource would be the following: wildfire, associated fire suppression efforts and fireline rehabilitation, timber harvest on both National Forest System land and private land, aspen fencing, fencing for livestock control, fuels treatment and reforestation on both National Forest System land and private land, National Forest and private roads and maintenance, County Road 63 maintenance, conifer and hardwood planting and protection, hazard tree cutting and riparian fuel treatment.

The cumulative effects of the wildfire, suppression activities, past timber management activities, and roads have greatly affected the visual quality that resulted in the existing condition being less than the Forest Plan objective for the visual corridor. The salvage logging that has occurred on private lands within the fire and the roadside hazard tree removal done to date on publicly owned lands affected about 12 percent of the fire area and are the most visible of the past timber management activities due to the disturbed ground, slash piles created, untreated slash, and color contrast of the stumps and skid trails. The increased visibility has made barbed wire fencing more noticeable which slightly detracts from a natural appearance.

Future activities that are expected to occur involve projects to speed vegetation recovery that can greatly improve visual quality, landscape aesthetics and scenic integrity within 25 years with a moderate improvement within 15 years. Vegetation recovery projects have effects that can last 100 years or more. Planting of hardwoods, shrubs and conifers is planned under a CE on about 70 acres in the visual corridor and about 330 acres of riparian and upland areas outside the visual corridor. Cages placed around planted hardwoods can add an un-natural appearing structures in the riparian areas resulting in a slight decrease in a natural appearance for about five years. The conifer planting will accelerate the recovery of the vegetative screening of storage areas, roads accessing the site, and the buildings in the Bear Valley Work Center administrative site. The planned fencing of quaking aspen sprouts will not only allow recovery, but expansion of the area occupied by aspen stands from about 77 acres to about 300 acres. Aspen recovery and expansion will increase visual diversity, especially when the trees turn color in the fall. Pole fencing around aspen patches can appear as rustic appearing if not built too tall. Tree planting is likely on salvaged private lands in accordance with Oregon forest practices regulations.

Future fuel treatments in riparian areas will reduce the excessive fuels that accumulate, greatly improving the visual appearance in the visual corridor because the the first 250 feet more or less along County Road 63 is in the immediate foreground and no other dead debris removal would be done except for hazard tree removal . Road maintenance can create a slight decrease in appearance when the blading and vegetation removal is fresh, but within one year, can result in a slightly improved appearance with the roads not having an overgrown appearance. All other ongoing and future actions listed in Appendix J would not affect scenery.

Alternative 1

No additional cumulative effects to what is common to all alternatives is expected.

Alternative 2

Conifer planting combines with other planned planting to speed the vegetation recovery on most of the area that was burned. This will have the positive visual effect of earlier elimination of the large openings. Aspen recovery and expansion when combined with

hundreds of acres of planted western larch trees will increase visual diversity more than double over that of Alternative 1. The diversity will be the most apparent when the trees turn color in the fall. This alternative harvests trees on about 61 percent of the area combining with the other recent harvests for a total of about 73 percent of the fire area. The combined removals add to the size and number of large created openings for a greater negative visual effect. The future project to reduce fuels in RHCA's combined with the fuel reduction planned in this alternative will ensure that the residue profile standards as part of the visual quality objectives in the foreground distance zone of the visual corridor are met.

Alternative 3

The vegetation recovery benefits to landscape aesthetics of planned projects combined with those planned with this alternative is similar to Alternative 2. This alternative harvests trees on about 40 percent of the area combining with the other recent harvests for a total of about 52 percent of the fire area which is about 21 percent less than with Alternative 2. Alternative 3 will result in a less altered landscape than with Alternative 2 due to the fewer acres treated and the higher number of snags left within treatment units. The future project to reduce fuels in RHCA's combined with the fuel reduction planned in this alternative will ensure that the residue profile standards as part of the visual quality objectives in the foreground distance zone of the visual corridor are met.

Alternative 4

There would be little additional cumulative affects to landscape aesthetics by removal of small dead trees when added to recent harvests due to the high number of larger dead trees retained.

Alternative 5

The vegetation recovery benefits to landscape aesthetics of planned projects combined with those planned with this alternative is similar to Alternative 2. This alternative harvests trees on about 53 percent of the area combining with the other recent harvests for a total of about 65 percent of the fire area which is about 8 percent less than with Alternative 2. The effects to landscape aesthetics from the removal of dead trees with Alternative 5 is intermediate between Alternatives 2 and 3. The future project to reduce fuels in RHCA's combined with the fuel reduction planned in this alternative will ensure that the residue profile standards as part of the visual quality objectives in the foreground distance zone of the visual corridor are met.

Unroaded Area Issue

Visual Corridor

ONRC Unroaded Area Number Two has about 200 acres within the visual corridor. This portion has most of the trees appearing green, although some are expected to turn brown based on the amount of fire damage that has been observed. There is one classified road

through the middle of this portion, some unclassified roads, many skid trails and stumps resulting from past harvesting. This area does not have the pristine, wilderness-like appearance associated with unroaded areas due to the effects of past management activities. There would be no effect to scenery as a result of the action alternatives because the area does not have characteristics of being unroaded.

Outside the Visual Corridor

Both ONRC identified unroaded areas have been altered by recent and older harvests that removed many of the large diameter trees. Most of the large diameter trees that remained after past harvesting were killed by the fire, especially in the Designated Old Growth Area in Area Number One, where there was a higher amount of large diameter trees. The amount of classified and unclassified roads, skid trails and stumps within the ONRC identified unroaded areas combined with the increased visibility of the landscape through the loss of live trees gives the viewer the same effects to landscape aesthetics as adjacent burned areas not identified by ONRC as unroaded areas. These areas do not have the pristine, wilderness-like appearance associated with unroaded areas. There would be no effect to scenery as a result of the action alternatives because the area does not have characteristics of being unroaded.

Consistency with Direction and Regulations

Visual Quality Objectives (VQOs) are minimum objectives and can be managed to a higher level where feasible. Modifications to the established visual quality objective requires a non-significant amendment to the Forest Plan if it is determined to be the best way to meet the management area goals of the Forest Plan.

Visual Corridor (MA 14)

Foreground

The VQO of Partial Retention is met by age 25 by alternatives 2, 3, 4 and 5 as a result of tree planting that accelerates reforestation. Alternative 1 does not reach partial retention until about 50 years due to the slower rate of reforestation through natural regeneration. Alternative 2 has a short term reduction in visual quality due to retaining only about 2.4 trees per acre but improves to be the same as all the other alternatives in about 15 years as a result of tree planting. The short term reduction would require a non-significant Forest Plan amendment.

Middleground

The VQO of Modification is met with alternatives 1, 3, 4 and 5. As in the foreground, alternative 2 reduces the visual quality to maximum modification requiring a non-significant Forest Plan amendment.

Outside the Visual Corridor (MA 1, 2, 3A, and 13)

The VQO of Maximum Modification would be met by all alternatives. Alternatives 1, 3 and 4 start at the higher rating of modification but are at maximum modification by age 15 when most of the snags have fallen. Because of tree planting accelerating reforestation, alternatives 2, 3, 4 and 5 improve to modification about 25 years sooner than with alternative 1.

Irreversible and Irretrievable Commitments

There are no irreversible and irretrievable commitments associated with the consequences of any of the alternatives analyzed to the visual quality or scenic integrity.